Game Art & Sound

Sound

- Midi files
  - Musical Instrument
  - Digital Interface
- Advantages
  - small
  - fast
- Disadvantages
  - synthesized
  - rendered

- Wav files
  - Waveform Audio
- Advantage
  - sampled
  - direct
- Disadvantages
  - big
  - slow

Sound in Java

- Create a URL (examples taken from SplashScreens of Beat The Bugs!)
  
  ```java
  private static final URL START_GAME_URL=
  SplashScreens.class.getResource("audio/destruction.wav");
  ```

- Create AudioClip

  ```java
  startSound=JApplet.newAudioClip(START_GAME_URL);
  ```

- Play the Audio Clip

  ```java
  if(GameLoop.audible) startSound.play();
  ```

- Sound Effects
  - wav files at http://www.thepocket.com/sounds.htm
  - midi files at http://www.mididb.com/
  - multimedia lab at 016 Old Chem for more advanced editing and sampling
    http://www.oit.duke.edu/ats/mps/hardware.html
Sound in Java

- Create only as many AudioClips as you'd like to play at once. Replay rather than recreate AudioClips.
- Use the loop methods of AudioClip to repeat a clip continuously, and stop to terminate the playing clip.
- Be sure to check GameLoop.audible
- Use the getResource method in order to generate the URL. This will make sound (images) work on your applet by loading the files from the jar.

Game Art

- Use Paint or a similar application to draw your own images.
- Extend Sprite and make a custom shape for fast sprites (ImageSprites take longer).
- Transparency makes ImageSprites really come alive.
  - Crop out portions of the image to be transparent by
    - painting a uniform color on what is to become transparent
    - save the image as a gif
    - use TransWeb http://www.mit.edu/transweb.html

Animated Gifs

- Make your own animated gifs to go on buttons
  http://www.gifworks.com/
- Make your own animated text
  http://www.cooltext.com/